

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>OPP043360KR</b>	<b>FOR FURTHER ACTION</b>		see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. <b>PCT/KR 2005/000129</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>16 January 2004 (16.01.2004)</b>	International filing date ( <i>day/month/year</i> ) <b>14 January 2005 (14.01.2005)</b>	
Applicant <b>KTFREETEL CO., LTD.</b>			

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

#### 1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see continuation of this first sheet.

2. ☐ Certain claims were found unsearchable (see continuation of this first sheet)

3. ☐ Unity of invention is lacking (see continuation of this first sheet)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in the continuation of this first sheet. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 2

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 2005/000129

Continuation of first sheet

**10/586106**

Continuation No. IV:

Text of the abstract

(Continuation of item 5 of the first sheet)

An antenna system measurer (110a, 110b, 110c) for a repeater and base station (10) measures powers of a progressive wave and a reflected wave of a transmit/receive antenna, and transmits measured results to a monitoring server (200) in a radio data format such as an SMS messages. The monitoring server (200) receives the radio data, identifies a repeater and a base station from sender information of the radio data, and calculates a VSWR based on the measured values. The VSWR is modified based on characteristics of the base station such as length and substance of feeders from a base station identifier corresponding to the sender information. According to the present invention, the remote antenna system is monitored in real-time without visits or installation fees, and a plurality of repeaters and base stations is managed in a combined manner.

---

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 2005/000129

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>7</sup>: H04Q 7/34, H04B 17/00, G01R 29/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>7</sup>: H04Q, H04B, H01Q, G01RDocumentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
----Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
WPI, EPODOC, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 6 197 059 A (KOKUSAI ELECTRIC CO LTD) 19 October 1994 (19.10.1994) (abstract). [online] [retrieved on 2005-03-11]. Retrieved from: EPODOC PAJ Database. <i>abstract, figures 1, 2 and their associated descriptions.</i> —	1-16
A	GB 2 354 115 A (UNIVERSITY OF SURREY) 14 March 2001 (14.03.2001) <i>abstract, figures 2-6 and their associated descriptions, page 1, line 5 - page 5, line 10, claim 1.</i> —	3, 5-9, 14-16

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search  
16 March 2005 (16.03.2005)Date of mailing of the international search report  
5 April 2005 (05.04.2005)Name and mailing address of the ISA/ AT  
Austrian Patent Office  
Dresdner Straße 87, A-1200 ViennaAuthorized officer  
KÖGL C.

Facsimile No. +43 / 1 / 534 24 / 535

Telephone No. +43 / 1 / 534 24 / 440

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 2005/000129

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2001/320754 A (NEC COMMUNICATION SYST.) 3 April 2002 (03.04.2002) (abstract). [online] [retrieved on 2005-03-11]. Retrieved from: EPODOC PAJ Database. <i>Abstract; Figs. 1-3 and their associated descriptions</i>	1,2,4,10
A	— JP 63 026 129 A (TOYO COMMUNICATION EQUIP) 5 July 1988 (05.07.1988) (abstract). [online] [retrieved on 16-03-2005]. Retrieved from: EPODOC PAJ Database. <i>abstract, figures 1-3 and their associated descriptions.</i>	1-16
A	— US 6 640 115 B1 (FUJIMOTO ET AL.) 28 October 2003 (28.10.2003) <i>abstract, figure 1 and its associated description, column 2, line 30 - column 5, line 56, claim 1.</i>	1

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.  
PCT/KR 2005/000129

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
GB	A	2354115	2001-03-14	JP	T	2003509883T	2003-03-11
				WO	A1	0118908	2001-03-15
				EP	A1	1214753	2002-06-19
				AU	A	6858200	2001-04-10
JP	A	20013207		none			
		54A2		none			
JP	A	6197059A		none			
		2		none			
JP	A	63026129		none			
		A2		none			